

**Professional Paper**

**DIFFICULTIES OF USING ADULT TRAINING METHODS  
WITH YOUNG ATHLETES - DANCERS**

*UDC 793.3.5*

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**Abstract.** *The listed problems are perceived from the biological, physiological, psychological and sociological aspects. The characteristics of child development are studied, considering that the choice of a training method should depend on the type of sport, as well as the characteristics of motor and functional development. In dance, training is considered to be a conscious way of learning movements, of achieving awareness of the body, and the perception of time, space and movement quality. The differences between techniques should be determined in the first training stage and not changed in the later stages. In addition to the retrospective on single motor abilities, training stages involved in working with children which are important for the different abilities are also mentioned, as well as training style. The principles of training which are applied in dance (the gradual increase in body stress, the intensification of training during the period of circular changes, the systematization of learning techniques and motor abilities, the synchronization of phases, individualisation, group dynamics) are listed separately.*

**Key words:** *training, dance, children, method, principles.*

INTRODUCTION

In the past few years, dancing as a profession in Slovenia has ranked amongst the world's best, in all age groups – youth, teenage and adult categories. **The question is, what approach is most suitable when working with younger people to make these early achievements last.**

In the past, the fast growth and development of the young as well as instant dancing success were achieved through **concentrated specialization, sufficient extra-curricular activities and the use of training methods, more suitable for adults**, which brought

professional success very early. In the urge to "produce" young competitors, we use methods that only **develop technique** and over-focus educational orientation towards dancing, particularly the selected dance category. The age of the young dancer is not considered. We often neglect alternative work methods which would encourage a child's **creativity, playfulness and the psychological experience of movement**. We over-accelerate the development of young dancers, prematurely using intensive training for better results, and, above all, using methods that are suitable for older dancers in the belief that "younger dancers are simply a smaller version of older competitors, they only train less" (Counsilman, by Kapus, 1989)-swimming instructor). We must change our attitude and our training of young stars who "burn-out", even before they have actually been lit, (for purely pedagogic reasons), or else professional sport will only produce **young champions, with stunted personalities**.

Of all the different aspects of professional dancing, when working with children as opposed to working with adults, the **psychological and pedagogical** factors should be emphasized the most, due to their delicate and specific nature (Štrum, 1989). The technical and methodical aspects of training are virtually impossible to ignore. Modern, professional training gradually accustoms a child to enormous physical efforts, while the child recognizes this as a **form of play**. This **lack "of playfulness" in child-training** (and not only in child-training) produces **robot-like** sportsmen and women, which is ethically unjustified. Despite the pressure from clubs and parents, instructors should find ways in which to develop a child's **creativity, playfulness**, as well as its **personality**, to ensure its **proper development into a successful competitor**.

The problem described is undoubtedly complex and should be examined from **biological or physical, psychological, and social** aspects.

#### TEORETICAL ASPECTS OF THE PROBLEM

##### 1. Child development characteristics which should affect the choice of work methods

The first question an instructor should consider is whether the training programme is adapted to **a child's specific development needs** and its **immature and uncategorized** characteristics and abilities.

Fuchs by Kapus, 1989 (a German expert in swimming) described a number of reasons for the need to pay special attention to the subject of children's involvement in professional sport:

- we are responsible for the activities our children undertake,
- the demanding nature of professional sport,
- hard training or drill can result in a declining interest and inactivity,
- because it is our duty to do this for our children interested in (swimming) **dancing**.

We can **overcome the current situation** (according to Štrum, 1973) by considering certain factors in the future. These factors can roughly be divided into internal and external factors:

**Internal factors** are the specific characteristics and abilities of young athletes. Their potential is determined genetically. Internal factors can only be influenced by the early and appropriate selection of a sport category or activity.

**External factors** can be divided into two groups:

- Environmental factors, which depend on the lifestyle and environment of young athletes and
- Training process factors, which include technical, methodical, pedagogical and psychological methods of the training process.

Both factors are strongly intertwined; genetic potential can only be exploited in a suitable environment, together with the use of appropriate training methods, and with a consideration of a child's biological, psychological and social integrity. Individual development phases must be recognized, well defined and systematically classified to ensure a continual development in sporting activities. These phases and the initial training process vary in numbers, duration and nature, depending on the type of sport. However, most categories can be classified into groups, (Milanovi}, et.al., 1993) according to a similar organization of the development phases of young athletes.

Experts usually categorize sport disciplines into 4 different groups:

1. **conventional sport disciplines.** These demand early training, substantial time to master **basic techniques**, an understanding of the **aesthetics**, along with some biological or physical stress. Experts often emphasize that such disciplines should be undertaken only after the child starts school. Professional dancing is, without doubt, included in such sports, along with skating, rhythmic gymnastics, gymnastics, etc.,
2. **sport disciplines which measure athletic achievements in a physical manner.** Such categories of sport require high energy and high information processing ability (above all, coordination), both of which require mastering techniques. This includes team sports, some athletic disciplines, all skiing disciplines, etc.,
3. **sport disciplines that do not require any early special training** (this is often even unsuitable), while experience from a broad spectrum of other sport activities is desirable. Such sports are combat sports, weightlifting and other disciplines which require high endurance levels and prolonged efforts,
4. a very specific sport is **swimming**, which has some special requirements requiring early training.

## 2. Some basic characteristics of motor and functional development of the child

In modern sports it is understandable that significant results from young athletes can only be achieved with **lengthy and continuous development**. Foreign research (The Canadian Sports Insitute) has shown that most modern World champions came into contact with the requisite resources and circumstances, typical of their individual disciplines, in early childhood. Most "played" with these objects and were occupied with the relevant basic activities as a form of play, or as a part of the everyday lifestyle of their parents.

**Learning dancing techniques cannot reasonably be considered** before the ages of 4 or 5, when a child has mastered walking and can cope with movement exercises for a considerable amount of time. This includes remembering a short sequence of gestures, steps and other movement structures; having some strength, a feeling for balance, coordination and other abilities connected with controlling the body. From this age a child enjoys hopping, rhythmic spinning, climbing, hanging, etc. A child also begins to compare himself with others, which includes the first traces of competitiveness.

**Physical growth** is often a decisive factor for a young athlete, particularly when searching for dancing partners. The period of growth can be divided into different stages. The first period, until the age of 3, is marked by fast growth. This is followed by a period of slower growth, from the ages of 4 to 11 (4–13 for boys). Growth intensifies from the ages of 11 to 14 (13–16 for boys), and slows once again after the ages of 17 to 18 (for boys). The qualitative basis for more demanding movement associated with sports, develops in the first phase, **until the age of 3**. During **puberty** the body undergoes vital changes, including accelerated growth, coordination breakdown, strengthened and increased production of sex hormones. During **adolescence** the body finally reaches a new balance.

90% of the **central nervous system** grows in the first 5 years. Synapses develop intensively; the entire nervous system is fully developed by the age of 10. **Coordination** improvement is most successful before the age of 7, before the final completion of nerve connections is finished. Later, coordination improvement depends more on disposition, developed in early childhood. Extensive and diverse motor neurone mobility encourages the formation of new ones. **Flexibility of movement** is particularly high between the years of 9 and 12 (girls) and 11 and 14 (boys). After puberty it has to be maintained constantly.

**The muscular mass** grows especially during puberty. The number of muscle fibres increases, new filaments develop, while the length of the existing fibres increases according to the bone development. Differences in muscular strength between the sexes increase after the age of 14. Sex hormones play a decisive role in muscular power growth, particularly with boys. Children ages from 9 to 12 have the greatest **explosive strength**. Children are advised not to develop their strength to its maximum (weight lifting, etc.), and any exercises they do should not strain the spine. However, short, strong, efforts with long pauses, which permit yet another effort of the same strength, are advised (**this is particularly important for pauses between individual dances**).

**Physiological abilities** also change. **Aerobic glycolysis energy processes** are as intensive in children as in adults, whilst **anaerobic glycolysis energy processes** are of a much smaller capacity. Glucose concentration is far lower in children than in adults, even at its peak. Anaerobic glycolysis processes are not that well developed in children. These processes improve with maturity (after the age of 13). The improvement of these abilities is often achieved with multiple, repetitive, sub maximal efforts, lasting for 30–80 seconds with longer 3–10 minute pauses (**changing categories**).

Anaerobic energy processes reach their maximum with boys at 18 and girls at 16. Oxygen consumption is greater in children than in adults, during an equal sub maximal effort.

**Endurance** is determined by the development of the heart, the arterial and respiratory systems, as well as the changing blood haemoglobin concentrations. Children have much lower endurance than adults. The skeletal system requires special attention when improving a child's endurance.

### 3. How to Undertake Training

A **child's stage of development** should always be considered when planning training and for any other training process. We should take advantage of certain **characteristics of individual development phases** in order to develop specific abilities and qualities, typical of these phases.

Youth training theories to an equal measure suggest that in most sports what is most important is to build the basic foundations of a skill during the **first training phase** (ages 4 - 8) and that specific elements of specialization need not be included in the training program. Such an approach is most common for preschool training, while beginners in older categories are often forced to learn basic techniques and master endless new dance sequences. This is the phase when one accustoms oneself with the sport, which some even call **pre-training**. The training program should **support diverse activities**, thus ensuring the even development of all bodily functions, as well as acquiring valuable movement experience. The child must receive as much **different information on movement** as possible, must familiarize itself with different environments - experiencing diverse and rich movement. Many studies even show that both a child's intelligence and its intellectual level develop with movement, up until the age of 7. Training methods are based on **play** and **improvised movement**, on stimuli that **provoke movement** and the process of **creative invention of different movements**. Above all, training is a way of learning **movement awareness and a consciousness of one's own body, and a perception of time, space and quality of movement**.

Thorough training of the "whole" body is of vital importance during this period of balanced development for all the main muscular structures and basic functional abilities, particularly the heart and arterial system; and the basic motor abilities, particularly strength and coordination. A certain extent of the motor-structures, acquired at the program level and automatized (basic figures in dancing) should also be mentioned here.

The **second training phase** (ages 9 - 15) is referred to as **the basic training phase** by the Germans. This is the phase when the basics of a chosen discipline in sports are acquired. Success in competing is not very important in this phase. A good understanding of the programme, which includes **special training** and **technique improvement**, besides the **usual basic preparation of the body**, is much more significant. Condition improvements are usually a second priority. One of the basic characteristics of any sport activity is an increased functioning of every system in the body, which occurs with the increased activity of the locomotive system. The abilities of circulation are particularly enhanced (the cardiovascular system, the respiratory system...). During puberty, training should not be too **intensive**; however, it should intensify gradually.

Many experienced instructors, working with youths in other sports disciplines, realize that the precise mastering of a **technique** should be learned very early and that technique deficiencies, acquired during the first training phase cannot be corrected. A child's **system of values and its attitude towards sport** forms very early, together with a technique. If a child does not develop a certain amount of interest for the sport during this period, it will not be able to bear the efforts, the hardship and sacrifice, required by modern training, in future years.

The possibilities for strength improvement are quite good, while the inherence coefficient proves rather low. Exercises for increasing strength **have been adopted for the specific needs of individual sport disciplines**. We are currently combining strength exercises with the other practice exercises that a certain discipline requires, as well as combining strength exercises with basic general activity techniques. Appropriate methods used for strengthening should be determined by examining the **kinematic and dynamic structures of the basic activity**, and their criteria. An analysis of forces, present in the basic activity, assists in the choice of methods which would be suitable for rational exercises for strength improvement.

Strength exercises should develop both in the same **direction** and with the same **amplitude** as the basic activity –in this case dancing. **The level of strain, intensity or the amount of force**, used in practice sessions should be greater than the level needed for the basic activity in competition; otherwise, the normal exercise has no effect on strength improvement. The duration of the strain and the tempo of movement should also be appropriate. Strength exercises should be combined with basic practice, or at least its imitation, as well as **exercises for stretching and relaxation**. Greater intensity (the degree of resistance and performance speed), quicker tempo and additional loads (weights, cuffs, and weighted vests) are essential.

The female body is not as capable of developing strength as the male (up to 40% less than the male body). It is not well suited for strength exercises. In relation to the male, strength is particularly inferior. Better coordination compensates for this relative weakness of the female body. Abdominal muscles and muscles of the lower back area often need to be strengthened. Body lifting exercises and exercises in pairs are most common for the strengthening of these muscles. For younger groups, strength exercises should be more diverse and should cover all the large muscle groups equally, to the fullest possible extent.

**Speed** is used in dancing, in various ways:

- reactive speed,
- the speed of movement
- the speed of execution of a certain gesture.

Mechanisms for the regulation of the intensity and the duration of nerve and muscular system excitation, movement structuring mechanisms, and muscle-tonus regulation mechanisms, all determine swiftness and speed. Complex movements, which demand good coordination, make the issue even more heated. Speed can be improved by:

- **improving performance technique** ( a more rational use of muscular power) and
- **strength improvement** (relative strength), which enables one to easily overcome the resistance of body weight.

Usually, this can generally be seen in faster dancing and in the greater use of maximum-speed dancing intervals (Zagorc, Jarc-Šifrer, 2003). Practice in using different conditions is advisable and particular exercises improve coordination and flexibility, in order to increase the "free" flow of energy. Forced rhythm limits dancing space, and decreasing dancing time can also be beneficial.

Endurance implies overcoming fatigue (Nett, by U{aj, 1989). If at all possible, we use our basic activity to improve endurance by increasing the length of training time. Exercises with a frequency fewer than 130 beats/min. do not have a substantial effect on the endurance of the body. Dancing at over 150 beats/min. stimulates anaerobic functions. The duration should be 90 min. at 150-160 beats/min; and under 60 min. at 160-170 beats/min. (for well trained athletes). We also often use the interval method with frequent breaks between intervals of intensive workouts. By shortening the performance (anaerobic capacity) and we achieve greater endurance at a slower tempo (aerobic endurance).

Children have the capability of accommodating their heart and circulatory system to strain, which relatively equal to that of adults. However, we should not expose children to longer periods of strain. It is important to watch for signs of exhaustion. The main danger is not the duration, but the intensity of an activity (frequent performances at competitions).

The training of children substantially differs from adult training. It is imperative that the training process over a period of several years should aim to **ensure proper development** leading to success in later phases, when the children are older. Such success is often determined by a **"good background" and sensitive development**, both of which originate from early childhood. Success at a certain phase in training is determined by the previous phases and by the amount of satisfaction that training and competing may bring. An incremental approach to the process, which ensures **steady growth**, is very important. Well balanced training encourages optimum growth. Successful learning helps to develop "a well-built" figure and enables a child to surpass others, which is especially important during puberty.

#### 4. A child's need to belong to social groups

A person is a member of a society from the very beginning. One is never biologically independent. We acquire behaviour, customs, responsibilities and culture from our society, through the process of socialization. A child takes part in activities within their **family** and in different social groups, of which their **dancing club** (where they spend much of their free time) is very important. **Participation in a group** (particularly a new one) presents the child with different patterns of behaviour, certain customs, norms, rituals, values, symbols, and rules - all of which may cause the child many problems, particularly during puberty and before starting school. Gaining recognition and approval, accepting new friends and instructors, is usually harder for children than for adults. In this process, the instructors play a decisive role, which requires: **successful communication with children** and the group as a whole; and a pleasant work environment and social integration. Motivation and success are often influenced by the way people feel in the club, particularly when it comes to younger members. Better relations (young children and adolescents have a very good feeling for these) mean better results.

The **relation between dancing partners** plays an essential role in dancing and often determines "their shared result". Refinement and sensitivity in movement, emotions, thoughts, behaviour, a touch, a sight and all verbal and non-verbal communication deserves special attention in the process of training.

The relations between children, their parents and their instructor are also very important. This is a separate subject, which requires a thorough and more detailed analysis. Modern sport requires **teamwork**, even when working with children. A team psychologist can be a great help to a trainer, and the list also includes a physiotherapist, a sociologist and an expert in other disciplines of dancing. Unfortunately, we continue to work on the basis of our intuition, often in isolation and above all, in ways we were used to during our own careers, particularly when working with developing children.

#### 5. Other factors we should consider

Dance training should aim at high achievement, so that every youth has the chance to become a champion, just like in skating, gymnastics and diving. However, training goals should be aimed primarily at systematic practice, and acquiring balanced basic motor-abilities, knowledge of technique, psychological stability, a sound value system, and health in general. Does this demand for results not provoke an overstrained tempo? Is it not true that we are neglecting movement techniques and, particularly, awareness of

movement, the process of adjusting to a partner, the feeling of being absorbed in music and the rhythm, in order to achieve quick results, which, unfortunately, often only represent temporary success?

There is a number of **principles**, recommended by experts (Dick, 1995) for training children and youths:

- the principle of gradually increasing stress on the body,
- the principle of spreading work over a whole year,
- the principle of periodization and cyclical change (taking into consideration a child's biorhythm),
- the principle of a systematic learning of technique and relevant motor-abilities,
- the principle of synchronizing with a child's phase of development,
- the principle of psychological suitability,
- the principle of individuality,
- the principle of group dynamics etc.

During the process of training, many essential principles of modern "sports education" are often forgotten, including **formation of value scales**, encouraging **self-education** and **interest in other art-forms**, acclimatization to the **regime of sport life** and **raising confidence**, and **controlling personalities** through a suitable approach (**learning working habits**). The question is, to what extent do we develop **partnership, a sense of being in a collective, the feeling of belonging to a certain group and the ability of overcoming defeat and appreciating victory?** To what extent do we increase **motivation during practice and competitions**, while including **the particular characteristics of every individual** and exploring different **possibilities of personal expression?** To what extent do we teach children to **analyze their training and performance** individually, help them develop **a feeling for aesthetics** and a **critical attitude towards their work?** Who are their role-models? To what extent do we accept a child's **own creativity** and understand its **search for identity?**

As instructors we are in a **conflicting situation**: we are expected to raise all-round athletes while the increasing numbers of competitions and a constant struggle for results simultaneously force us into ever more specialized training. Training is a constant compromise between theoretical training requirements and our competitive system (Orel, 1989). **During childhood, training should be a form of preparation, in order to make it possible for one harvest the best possible results at a later stage.**

When planning training we should always consider the following facts: that every individual is an **unknown, complicated and complex system**; **that training is a set of different types of specific physical efforts**; that the consequences of particular efforts and strains, over a longer period of time, can not be predicted; and that **physical and mental development should therefore be monitored and tested** constantly. These tests are helpful in determining the reactions of the body to the training, as well as the dancer's state as a result of his preparation.

Dancing is not only a sport discipline, but also a **form of art**, which combines movement with rhythm and music. This is another issue we must consider. Art, a feeling for aesthetics (makeup, haircuts, clothes!), along with music, bring warmth, happiness and satisfaction into a child's world, which is often a source of motivation for enduring the hard work modern training implies. Dancing is a part of the **education in aesthetics**.



**Like play, dancing therefore has enchanting powers:** it represents freedom for a child or an adult, overcomes barriers, provokes emotional pleasure and brings balance to the whole being. **It is the art of the heart**, often beyond rational comprehension. We can sometimes sense rapture and ecstatic inspiration, the signs of inner pleasure as well as a special light in the eyes of dancers.

Far too often do we find dance-floors full of grim faces, expressions showing anything but happiness or lightness of movement. Do we pay enough attention to this form of spiritual expression through movement? Dancing is determined by constant communication, with one's partner, the public, or with oneself. **The path to mastering expression through body language is long and hard**, particularly if we do not pay enough attention to it in training. How often do we actually explore **"the language of gestures"** with a child, how many research methods have we developed in this field, how often do we allow children to create, invent and search for their own means of expression? Do we even have the courage to go beyond the steps and techniques, to begin to explore **spiritual worlds**? Are we aware that the desire to create is universal, that **every person, especially a child, possesses a certain amount of creativity, determined by its own experiences, imagination and individuality**?

Do we even allow ourselves to experience the primitive force of rhythm, which represents **a link between order and freedom, strain and relaxation, the power of reasoning and the spiritual freedom of the soul...?**

We are faced with the inevitable necessity of combining the knowledge of many different fields, different professions and sciences. Even in the field of dancing, interdisciplinary research between the psychological, didactic, biomedical and sociological viewpoint is imperative in the future.

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## **PROBLEMI KORIŠĆENJA TRENAZNIH METODA ZA ODRASLE NA MLADIM SPORTISTIMA- PLESAČIMA**

**Meta Zagorc**

*Navedeni problemi sagledani su sa biološkog, fiziološkog, psihološkog i sociološkog aspekta. Istaknute su karakteristike razvoja dece uzimajući u obzir da će izbor metoda treniranja zavisiti od vrste sporta, kao i karakteristika motoričkog i funkcionalnog razvoja. U plesu se trening posmatra kao način da se pokreti uče svesno, da se stekne svest o telu, percepciji vremena, prostora i kvaliteta pokreta. Diferencijacija tehnika treba da se izvrši u prvoj trenažnoj fazi, a da se u kasnijoj fazi ne menja. Uporedo sa osvrtom na pojedinačne motoričke sposobnosti istaknute su trenažne faze u radu sa decom značajne za različite sposobnosti, kao i načini treninga. Posebno su navedeni principi treninga primenljivi u plesu (gradaciono povećanje stresa tela, intenziviranje treninga tokom godine, periodizacija kružnih promena, sistematičnost učenja tehnika i motoričkih sposobnosti, sinhronizacija faza, individualnost, dinamika grupe).*

*Ključne reči: trening, ples, deca, metode, principi.*